WHAT IS CLAIMED IS:

1. An apparatus for feeding a chemical solution to an external device, the apparatus comprising:

a preparation tank supplied with a first stock solution and a second stock solution to mix the first and second stock solutions and prepare the chemical solution;

a circulation pipe connected to the preparation tank to circulate the chemical solution that is being prepared;

a feeding pipe connected between the preparation tank and the external device to feed the external device with the chemical solution contained in the preparation tank;

a pump for sending the chemical solution in the preparation tank to the circulation pipe and the feeding pipe;

a concentration detector arranged downstream to the pump to detect the concentration of the chemical solution; and

a controller for controlling the concentration of the chemical solution in the preparation tank in accordance with a detection value of the concentration detector and for controlling the feeding of the chemical solution.

2. The apparatus according to claim 1, wherein the concentration detector is arranged so that the chemical solution flows upward through the concentration detector.

3. The apparatus according to claim 1, wherein the first stock solution is a slurry stock solution, the second stock solution is an oxidizing agent, the chemical solution is slurry formed from a mixture of the slurry stock solution and the oxidizing agent, and the concentration detector is an ultrasonic concentration detector that continuously

detects the concentration of the oxidizing agent in the slurry.

4. The apparatus according to claim 3, wherein the oxidizing agent is aqueous hydrogen peroxide.

5. The apparatus according to claim 3, wherein the preparation tank is one of a plurality of preparation tanks that includes a first preparation tank and a second preparation tank, wherein the controller alternately performs the preparation of the slurry and the feeding of the slurry in each of the first and second preparation tanks, and the controller controls the first and second preparation tanks so that one of the preparation tanks performs the preparation of the slurry while the other one of the preparation tanks performs the feeding of the slurry, the controller adjusting the concentration of the oxidizing agent in the slurry in accordance with the detection value when the slurry is being prepared and when the slurry is being fed to the external device.

6. The apparatus according to claim 5, wherein the controller includes a concentration control unit for adjusting the concentration of the oxidizing agent in the slurry and for controlling the supplied amount of the oxidizing agent in accordance with the detection value of the ultrasonic concentration detector.

7. The apparatus according to claim 6, wherein the concentration control unit calculates a difference between the detection value of the concentration detector and a predetermined target value and calculates an additionally required amount of the oxidizing agent based on the amount

of slurry in the preparation tank and the difference.

8. The apparatus according to claim 7, wherein, when preparing the slurry, the concentration control unit performs primary preparation, in which the oxidizing agent is supplied so that the concentration of the oxidizing agent in the slurry is less than the target value, and secondary preparation, in which the oxidizing agent is additionally supplied so that the detection value matches the target value.

9. A method for preparing slurry comprising the steps of:

preparing slurry by mixing a slurry stock solution and an oxidizing agent, the oxidizing agent being mixed so that the concentration of the oxidizing agent in the slurry is less than a predetermined target value;

detecting the concentration of the oxidizing agent in the slurry; and

additionally supplying the oxidizing agent so that the concentration of the oxidizing agent becomes equal to the predetermined value.

10. The method further comprising the step of:

circulating the slurry in the preparation tank.

11. The method according to claim 10, wherein the detecting step includes continuously detecting the concentration of the oxidizing agent in the slurry that is being circulated.

12. The method according to claim 11, wherein the additionally supplying step is performed in accordance with

the concentration of the oxidizing agent in the slurry that is detected in the detecting step.

13. An apparatus for feeding an external device with slurry formed from a mixture of slurry stock solution and aqueous hydrogen peroxide, the apparatus comprising:

a first stock solution tank containing the slurry stock solution;

a second stock solution tank containing the aqueous hydrogen peroxide;

a preparation tank supplied with the slurry stock solution and the aqueous hydrogen peroxide from the first and second stock solution tanks to prepare the slurry;

an agitator for mixing the slurry stock solution and the aqueous hydrogen peroxide in the preparation tank;

a feeding pipe connected between the preparation tank and the external device to feed the slurry from the preparation tank to the external device;

a pump arranged in the feeding pipe to send the slurry through the feeding pipe;

a circulation pipe connected between the feeding pipe and the preparation tank downstream to the pump to circulate the slurry in the preparation tank;

an ultrasonic concentration detector for continuously detecting the concentration of the aqueous hydrogen peroxide in the slurry, wherein the concentration detector is arranged between the pump and the circulation pipe so that the slurry flows upward through the concentration detector; and

a controller for maintaining the concentration of the aqueous hydrogen peroxide of the slurry in the preparation tank at a predetermined target value and for controlling the feeding of the slurry to the external device.

14. The apparatus according to claim 13, wherein the preparation tank is one of a plurality of preparation tanks that includes a first preparation tank and a second preparation tank, wherein the controller alternately performs the preparation of the slurry and the feeding of the slurry in each of the first and second preparation tanks, and the controller controls the first and second preparation tanks so that one of the preparation tanks performs the preparation of the slurry while the other one of the preparation tanks performs the feeding of the slurry, the controller additionally supplying the aqueous hydrogen peroxide so that the concentration of the aqueous hydrogen peroxide in the slurry is maintained at the target value when the slurry is being prepared and when the slurry is being fed to the external device.